Adcharan Arivuchelvan

647-467-9552 aarivuch@uwaterloo.ca linkedin.com/adcharan

Experience

Anthony and Associates Professional Law Corporation **Jun 2021 – Jun 2023**
Front Desk Receptionist *Toronto, ON*

- Provided customer service with incoming clients and handled personal information regarding their home purchase and mortgage.
- Attended phone calls from clients, other law firms, and financial institutions and entered mortgage and client information into the database while following up on any outstanding issues.

F1 Electric Waterloo - Suspension Team Member **Sept 2023 - Sept 2024**
Student Design Team *Waterloo, ON*

- Researched to develop and optimize a cost-saving car gasket material
- Utilized **Solidworks** to implement material onto existing chassis.

Midnight Sun Solar Race Car Team - Electrical/Dynamics Team Member **Sept 2023 - Sept 2024**
Student Design Team *Waterloo, ON*

- **Designing and constructing PCBs** using **Altium Designer** for various subsections such as battery management, power distribution and solar sense.
- Building a practical, easy-to-debug, and **resilient electrical system**, taking full advantage of both hardware and software capabilities.
- Helped design a jig in Solidworks, and ran FEA tests on parts to simulate various real life situations.

CNE - Screemers **July 2023 - Sept 2023**
Booth Coordinator *Toronto, ON*

- Managed booth finances on **Microsoft Excel** and provided hospitality to booth customers.
- Created multiple levels of difficulty and raised profits by creating brand new visual advertisements.

FRC - Scratch for kids **March 2021 - May 2021**
Tutor *Toronto, ON*

- Created an online video course for kids using PowerPoint to teach kids basic scratch skills.
- In addition, taught basic intro-level Python programming.

Projects

QuakeMaster | *Solidworks* **Nov 2023**

- Created a shake table, jenga game for little kids
- Used **Solidworks** to design an interlocking brick system designed to enable the creativity of kids.
- Helped to design the cam mechanism used to uplift and bring back the various plates of the shake table back to its original position utilizing gears. Drew various sketches of cam mechanisms in **AutoCAD** to test different displacements of the plates.
- Used **3D-Printing** to create the blocks and the gears used in the shake table.

EV3 Robot - Klaw Machine | *C Programming* **January 2023**

- Created a robot that can automatically detect objects within a vicinity and pick them up.
- Used **RobotC** to program the robot to automatically detect an object within a 360-degree radius and drive to it.
- Used mathematical calculations to optimize the distance between the object and the crane to pick it up.
- Designed the hinge mechanism of the crane and the claw mechanism to pick up the object using **SolidWorks**.

Keychain | *SolidWorks, AutoCAD* **January 2023**

- Used AutoCAD to design keychain components using proper engineering notation for threaded holes, tolerances etc.
- Transferred files into SolidWorks files to do 3D assembly of the object in SolidWorks, while properly maintaining any tolerances, threads etc.

FRC Robotics | *Solidworks, Java* **Sept 2022**

- Used **Solidworks**, to the claw mechanism and weight stabilizing platforms for the robot.
- Utilized **Java** to implement independent directives for the robot. In addition, it helped to design the electrical circuitry of the robot.

Functioning Fidget Cube | *Solidworks, Technical Drawings, 3D Printing* **Dec 2023**

- Used **Solidworks** to create a fidget cube that alleviates stress for the user using various mechanical processes.
- Utilized a 13 Prusa i3 MK3S+ to **3D Print** to test various models.
- Conducted test for various fits and tolerances to optimize the combination between compactibility and playability and create an optimized user experience.

Skills

Languages: Java, C++, HTML/CSS
Tools: 3D printing, AutoCAD, Solidworks, Technical Drawing

Education

University of Waterloo **Sep. 2023 – Apr. 2028**
Bachelor of Applied Science in Mechanical Engineering *Waterloo, ON*

Relevant Coursework: Digital Computation, Circuits, Intro to Mechanical Engineering